

TCS-19979-80
14 May 1980

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MEMORANDUM FOR: Director, National Photographic Interpretation Center
FROM : [REDACTED]
Liaison Officer, NPIC
SUBJECT : Annual Report on NPIC Interagency Liaison (U) 1979

1. (U) Attached is a chronological listing of documented contacts that NPIC has made with nonintelligence-oriented agencies throughout calendar year 1979. I know that many more informal exchanges have occurred, especially with academia, that though not important in themselves, reflect a growing acknowledgement of NPIC's dominant role in imagery exploitation.

2. (U) Well over 20 agencies are represented in the 1979 chronology. Among these are components that have relied on NPIC guidance and support for many years. Others like the USDA Foreign Agricultural Service, the USDI National Cartographic Information Service, and the National Oceanographic and Atmospheric Agency are relative newcomers who are just becoming interested in remote sensing techniques. The degree to which NPIC provides technical assistance to such agencies will directly reflect upon its reputation as a focal point for imaging exploitation technology and, in its broadest sense, as a national Center.

3. (U) The cost to NPIC for pursuing this responsibility during 1979 has been small. The Center has provided special photographic processing and enlargement support to some of the agencies, briefings and tours to others, and has entered into agreement with the EPA, which involves the one year loan of an NPIC special light table, to that agency. In return NPIC has received advanced knowledge of research programs being pursued by the civil community and other non intelligence agencies, has acquired special requested unclassified prints and photographs, and has become privy to the innovative thinking of many U. S. leaders in remote sensing and its applications.

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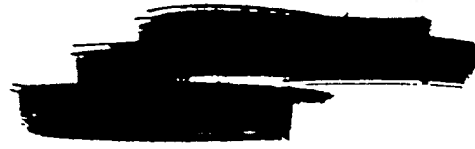
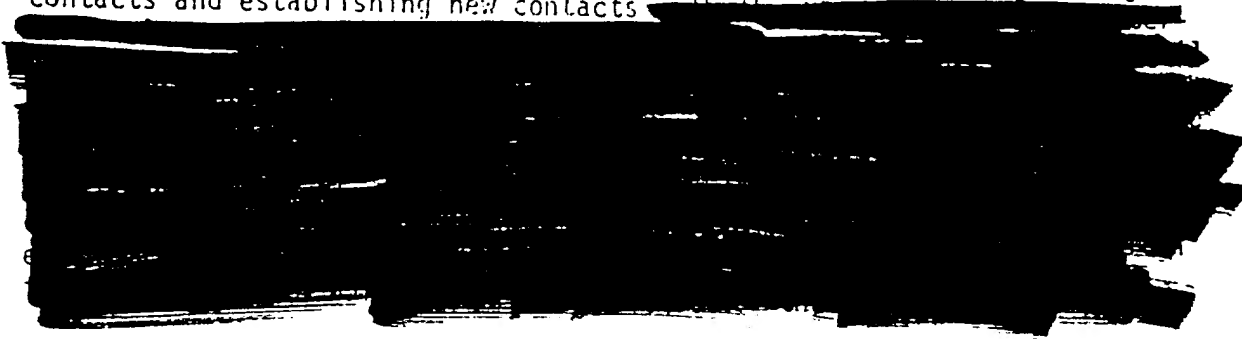
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AT

SUBJECT: Annual Report on NPIC Interagency Liaison (U)

4. (S) My intent for calendar year 1980 is to conduct my liaison at essentially the same pace as the previous year, maintaining all my old contacts and establishing new contacts



Attachment:
a/s

Distribution:

- Copy 1 - NPIC/ODIR
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- 5 - NPIC/CIG
- 6 - NPIC/[REDACTED]
- 7 - NPIC/TSG
- 8 - NPIC/TSG/LO

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Chronological Listing of NPIC Contacts
with the Non-Intelligence Oriented Community

I. The Environmental Protection Agency (EPA)

- 29 Jan. - (U) NPIC received from the EPA Environmental Photographic Interpretation Center (EPIC) several requested unclassified prints and enlargements depicting the use of photos to monitor pollution, land use, tree vigor, and the effects of shallow water currents on shore lines. These photographs were used in Mr. Dino Brugioni's briefing to the Smithsonian Associates in April 1979.
- 13 Aug. - [REDACTED]
- 21 Aug. - [REDACTED]
- 30 Aug. - (U) The EPA/EPIC requested the loan of the NPIC controlled Spectrum Light Table for approximately one year. The required paper work was accomplished, the memo of understanding was reviewed by the OGC and the memo was signed by Directors of NPIC and EPIC. The table was shipped to the EPIC in early December.
- 16 Nov. - (U) The EPA/EPIC provided on request several unclassified color transparencies and prints of domestic scenes to NPIC. These were used as photographic illustrations in the NPIC family day open house in December.
- 29 Nov. - (U) Arrangements were made for a visit by Chief, TSG to the EPA/EPIC. Director, EPIC provided a briefing on his responsibilities and a tour of his facility.

II. Sandia Laboratories

- 28 Sep. - (S) A visit was made to Sandia Laboratories to discuss with Mr. Don Lundergan an ongoing joint project that is looking into means to detect [REDACTED]
- 10 Oct. - (S) Mr. Lundergan visited NPIC/IEG and TSG to review efforts conducted on the above project. He also discussed the utility of [REDACTED] for assisting in the

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solution of the problem. A meeting was arranged with the Deputy Director, NPIC to discuss certain [REDACTED] aspects that Sandia felt it could support.

III. The United States Geological Survey (USGS)

A. USGS Topographic Division

- 29 Jan. - (U) Alden Colvocoresses provided NPIC with several LANDSAT photos and a report depicting the utility of LANDSAT for detecting and mapping shallow water shoals. The material was used by Mr. Brugioni in his briefing to the Smithsonian Association.
- 13 Mar. - (U) NPIC answered a USGS request by providing them with special enlargements of LANDSAT coverage. The USGS is looking into the utility of LANDSAT coverage for making 1:24000 scale maps.
- 2 Apr. - (U) NPIC answered a USGS request for maximum enlargements of LANDSAT coverage of [REDACTED]. These enlargements will be used to show the [REDACTED] quality of LANDSAT coverage, [REDACTED].
- 21 Jun. - (U) Mr. Colvocoresses requested special enlargements to mapping scales of a current LANDSAT acquisition [REDACTED]. His intent is to depict the capability of using LANDSAT photographs as a map base. The material was provided to him prior to his 15 July deadline.
- 17 Jul. - (U) NPIC personnel visited Mr. Colvocoresses to discuss the results of his briefing on the use of LANDSAT as a map base.
- 15 Aug. - (U) NPIC hosted a briefing to the imagery Community on future LANDSAT Programs, given by Alden Colvocoresses. He also outlined USGS plans to investigate other types of collection that could be used by them in the space shuttle era.
- 20 Sep. - (U) NPIC fulfilled a requirement from the USGS topographic Division for special enlargements of selected LANDSAT imagery. They are investigating the use of optimum reproductions of LANDSAT imagery at precise mapping scales for the making of medium scale maps.
- 11 Oct. - (U) NPIC provided additional enlargements of selected LANDSAT coverage to the USGS to aid them in their mapping studies.

B. USGS - Special Mapping Center

- 14 May - (U) The Director of the USGS Special Mapping Center provided a briefing and tour of his facility to NPIC/TSG and IEG analysts.

C. USGS - National Cartographic Information Center (NCIC)

- 24 Jul. - (U) USGS/NCIC provided to NPIC a retention copy of a canned slide talk show depicting the charter and goals of NCIC. The briefing was provided to interested NPIC personnel and now resides with the NPIC Interagency Liaison Officer.
- 28 Aug. - (C) Several NPIC members were invited to attend an all day Symposium celebrating the inauguration of NCIC's Map and Chart Information System. This system incorporates the indexes of more than 80 map libraries into one computerized information system. This index is an excellent tool for anyone establishing [REDACTED] ground truth, for special studies.

IV. National Aeronautics & Space Administration (NASA)

A. NASA Headquarters

- 1 Feb - (U) NASA Headquarters provided NPIC with several LANDSAT prints of various European capitals. This was in answer to a request to NPIC from General Aaron, who was responding to several ambassadors' requests for satellite coverage of of their areas of responsibility.
- 16 Feb. - (S) NPIC answered a NASA request for information on [REDACTED] target specifications. NPIC provided them with the resolution and contract specifications and with the name of the USAF contract monitor [REDACTED]
- 13 Mar. - (U) NPIC requested and received several JPL processed color photographs of the planet Jupiter. These images were used by Mr. Brugioni in his briefing to the Smithsonian Institute.

B. NASA Ames Research Laboratories

- 24 Sep. - (U) C. Lucas visited the NASA/Ames Research Center, Applications Aircraft and Future Programs Office (AAFPO) at Moffett Field, California. He discussed with the C/AAFPO the future plans for his office and their interface with the USDA/Forestry Service. The AAFPO is planning to acquire a TRI aircraft by mid-1981 and has already placed orders for two IRUS II Cameras. The office has had several requirements from the state of Alaska, the Forestry Service and the various wildlife agencies to cover large areas within the U.S. using primarily color and color IR film in their optical bar camera. In the spring of 1980 at the request of USDA/FS they will be flying several thousand square miles of coastal Texas, Louisiana, Mississippi and Florida to document 1979 hurricane damage to these states.

C. NASA Johnson Space Center

1 Oct. - (U) [REDACTED] visited Dr. John Dornbach, Life & Space Sciences Division (L&SSD), NASA, Johnson Space Center, Houston, Texas. Dr. Dornbach reviewed the new reorganization of L&SSD focusing on their three primary functions, space medical research, extraterrestrial geology (primarily Luna rock analyses) and research in earth observation from space. Of primary interest to NPIC is the fact that Dr. Dornbach is the NASA contract monitor for the NASA large format camera that will be installed in the third shuttle. He envisions additional slippages in the shuttle program, hinting that the first launch may not be until summer/fall 1980. Should that be the case the large format camera (which is on schedule) would become operational in late 1981, early 1982. This twelve inch focal length camera is being constructed at ITEK. The metritek lens is "distortion free" (less than 10 microns) and is designed for photogrammetric use. The lens is color corrected and capable of achieving 80 lines per millimeter on 3404 film. The camera will provide stereoscopic coverage, has a film capacity of 4000 feet and a ground resolution of 75 feet from an orbit 294 nm (60 feet from a 145 nm orbit). NASA is also looking into an alternative plan to put the camera aboard a multimission space craft that would be placed in position by the shuttle, but could work independently for up to 60 days, and then would be retrieved by the shuttle.

D. NASA Goddard Space Center

19 Oct. - (U) Several NPIC personnel attended a group tour of the Goddard Imagery Processing Facility, where the facility demonstrated the support to and exploitation of LANDSAT, NIMBUS, The heat capacity mapping mission and the synchronous meteorological satellites.

E. NASA Jet Propulsion Laboratory (JPL)

25 Sep. - (U) [REDACTED] visited Dr. James Burke of the Technical Staff at the NASA Jet Propulsion Laboratory in Los Angeles, Calif. The latest images of the planet Jupiter and its moons were reviewed and discussed and a tour of the imagery processing facility was provided. Plans for the January 1982 launch of the JPL Galileo space craft from the Shuttle and its planned rendezvous with Jupiter in mid-1985 were also discussed. Mr. Burke stressed the need for continual exchange between NPIC and the JPL especially in the realm of digital imagery enhancement.

V. Department of Energy (DOE)

10 Sep. - (S) [REDACTED] met with Mr. John Meinhardt to discuss a pending visit to Sandia Labs to discuss [REDACTED]
[REDACTED]

VI. National Archives

- 23 Feb. - (U) Mr. Dino Brugioni held a press conference concerning the Auschwitz article. CBS, NBC and ABC television networks were represented.
- 10 Apr. - (U) NPIC provided Mr. Dick Youso of the National Archives a negative report on their efforts to enhance an old Spanish Land Grant. Mr. Youso was provided the names of several contractors who may be able to provide the research necessary to accomplish the task.

VII. The Smithsonian Institute

- 24 Apr. - (U) Mr. Dino Brugioni gave a presentation on the Evolution of Aerial Photographic Reconnaissance to the Smithsonian Associates, staff and volunteers.
- 14 Aug. - (U) Mr. Dino Brugioni met with officials of the Smithsonian Institute concerning his providing a lecture to the Smithsonian Associates at a later date.

VIII. United States Department of Agriculture (USDA)

A. Forestry Service

- 12 Feb. - (U) Members of NPIC/TSG and IEG visited Mr. Ray Allison of the Forestry Service to request unclassified photography which depicted how the Forestry Service used film products in their analyses. (The Forestry Service subsequently provided several photos for NPIC, as requested.) Mr. Allison also briefed NPIC personnel on a future program that will be conducted by the USDA, USDI, NASA and USDC which will result in establishing a sophisticated earth resources package in a future space shuttle.
- 1 Oct. - (U) [REDACTED] visited Dr. Phil Webber, USDA Forestry Service, Johnson Space Center, Houston, Texas. Dr. Webber discussed the continuing studies being conducted under the Nationwide Forestry Applications Program, mentioning his close relationship with NASA Ames U-2 manager Jim Cherbeneau. He mentioned the domestic renewable resources inventory that the FS is conducting using both LANDSAT and Scheduled U2 coverage. He is very interested in being brought up to date on the latest camera films [REDACTED] He plans to visit NPIC the next time he is in Washington to discuss these areas.

B. Foreign Agricultural Service

- 1 Oct. - (U) [REDACTED] visited Dr. James Murphy, C/Crop Condition Assessment Division, Foreign Agricultural Service USDA, Johnson Space Center, Houston, Texas. Dr. Murphy has the

responsibility for conducting follow-on Project Lacie studies and his five year plan encompasses the operational exploitation of products from LANDSAT D, the Large Format Camera and the Agristars collection efforts. His product will be projections on all cereal crops throughout the world. His customer will be the World Food Board. He has prioritized the geographical areas where cereal crops are grown and will concentrate first on the various wheats, soybeans and rice. He currently has one PI station (with plans for at least five more) designed around the ESL IDIMS and a HP 3000 computer. He has the standard ESL earth resources package and has added some software of his own. He also has access on-line to a large computer where he has additional data bases. Two bases which may be useful to NPIC are: a data base which geographically locates all USSR weather stations and another which can provide descriptions of soil type for geographic areas throughout the world, based on a 12 mile by 12 mile grid system. These data bases can be combined and correlated with daily weather reports to arrive at information important to the growth cycle of vegetation.

IX. National Oceanic and Atmospheric Administration (NOAA)

24 May. - (U) NPIC hosted a briefing by NOAA on the joint USDA, NASA, USDC, USDI and AID Multiyear Research Program entitled "Agriculture & Resources Inventory Surveys Through Remote Sensing (AgRISTARS)." Members of NPIC, OIA and OGCR attended the briefing.

X. Federal Bureau of Investigation (FBI)

Jan. - (U) Throughout the past two years NPIC has maintained informal contacts with the FBI through its membership on the NPIC-chaired Terrestrial Information Exchange (TIE) Panel. Although most contacts involve the technology surfaced within the panel, a significant amount of technical information concerning exploitation as well as mensuration is exchanged to the mutual benefit of all concerned.

3 Oct. - (U) Mr. Jerry Richards, Liaison Officer for the FBI visited [REDACTED] Mr. Richards discussed the FBI input to the NPIC managed Terrestrial Photogrammetry Course being held in March 1980. During the discussions he mentioned that the FBI is looking for a low cost aerial surveillance capability. He was provided a brochure on the E.P.A. enviropod which appears designed for his needs. Subsequently Mr. Richards asked for and received the address and telephone number of the D/EPIC/EPA who designed and presently has one of the camera systems. A meeting has been arranged for the FBI to visit EPA/EPIC and view the camera and its products.

XI. United States State Department

30 May - (U) Mr. Dino Brugioni met with the Israeli minister and briefed him on the Auschwitz photos.

24 Aug. - (U) NPIC/IEG provided to AID with a requested analysis
[REDACTED]

Sep. - (U) [REDACTED] provided members of the State Department with a briefing on Systems Resolution.

XII. The United States Coast Guard (USCG)

3 Oct. - (TS) [REDACTED] attended a meeting hosted by the U. S. Coast Guard, and OGCR/ERAC. The meeting was held at OGCR/ERAC to initiate some thinking [REDACTED]

[REDACTED]
The decision was to establish an ad hoc group that would review current capabilities and arrive at potential procedures [REDACTED] as well as delineate lucrative avenues to conduct research against current inabilities.

24 Oct. - (TS/TK) Visit to U. S. Navy NOSIC, Suitland, Maryland:
[REDACTED]

6 Nov. - (TS) [REDACTED] arranged and hosted a visit by Commander James Kenny, U. S. Coast Guard, to NPIC. Commander Kenny is a member of the InterAgency Ad Hoc Group looking into means [REDACTED]

XIII. The U. S. Army Materials Evaluation Research & Development Command (MERADCOM)

A. [REDACTED]
[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

XIV. United States Army Engineering Technology Laboratory (ETL)

19 Oct. - (U) [REDACTED] attended a tour of the USAETL [REDACTED] and a demonstration of an experimental field deployment of the U. S. Army [REDACTED] imagery readout system.

XV. Miscellaneous

2 Mar. - (U) Mr. Dino Brugioni provided a briefing sponsored by the Brookings Institute to a Conference for Business Executives on Federal Government Operations.

18 Jul. - (U) [REDACTED] met with members of the CIA Office of General Counsel to discuss the legal aspects of providing technical support to the civil community.